

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-011513**Date Inspected:** 18-Jan-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	Xu Xian Ping	<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>
<b>Inspected CWI report:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	
<b>Electrode to specification:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	
<b>Qualified Welders:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	
<b>Approved Drawings:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	
		<b>Delayed / Cancelled:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	
<b>Bridge No:</b>	34-0006	<b>Component:</b>	OBG Sub-Assembly	

**Summary of Items Observed:**

On this day Caltrans OSM Quality Assurance (QA) Inspector Stefan Holmes was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhen Hua Port Machinery Company (ZPMC) at Chang Xing Island in Shanghai, China.

**Non-Destructive Testing:**

Ultrasonic Testing (UT) pursuant to NDT Inspection Notification Sheet (Document No. 005075):

This QA inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows:

1. CB202A-014-002, 014

This QA Inspector observed the following work in progress:

Flux Cored Arc Welding (FCAW) of 20TR3-004; Weld 017, 015. Welder is identified as 051356. ZPMC Quality Control (QC) is identified as Guo Yuan Ting. Weld Procedure Specification (WPS) is identified as WPS-B-T-2231-TC-U5-F. Welding appears to conform to the requirements of the WPS used.

Flux Cored Arc Welding (FCAW) of 20TR2-004; Weld 011. Welder is identified as 214945. ZPMC Quality

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Control (QC) is identified as Guo Yuan Ting. Weld Procedure Specification (WPS) is identified as WPS-B-T-2231-TC-U5-F. Welding appears to conform to the requirements of the WPS used.

Flux Cored Arc Welding (FCAW) of FB204-044; Weld 063, 065. Welder is identified as 204338. ZPMC Quality Control (QC) is identified as Guo Yuan Ting. Weld Procedure Specification (WPS) is identified as WPS-B-T-2231-B-U2-F. Welding appears to conform to the requirements of the WPS used.

Flux Cored Arc Welding (FCAW) of FB204-043; Weld 063, 065. Welder is identified as 204338. ZPMC Quality Control (QC) is identified as Guo Yuan Ting. Weld Procedure Specification (WPS) is identified as WPS-B-T-2231-B-U2-F. Welding appears to conform to the requirements of the WPS used.

Flux Cored Arc Welding (FCAW) of FB204-042; Weld 063, 065. Welder is identified as 204338. ZPMC Quality Control (QC) is identified as Guo Yuan Ting. Weld Procedure Specification (WPS) is identified as WPS-B-T-2231-B-U2-F. Welding appears to conform to the requirements of the WPS used.

This QA Inspector observed Magnetic Particle Testing (MT) performed by ZPMC MT Technician Jin Jian Ting of LD3022-001 (side A); 12 Welds tested with MT indications identified as rejects by the ZPMC MT Technician at the following locations:

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|--|---|
| 1. Weld 007; Y=140; L=12mm; LLI (Longitudinal Linear Indication) | 11. Weld 013; Y=3200; Diam=4mm; PO (Porosity) |
| 2. Weld 007; Y=1000; L=14mm; TLI (transverse linear indication)  | 12. Weld 013; Y=1860; L=5mm; TLI              |
| 3. Weld 007; Y=1720; L=14mm; TLI                                 | 13. Weld 013; Y=1100; L=9mm; TLI              |
| 4. Weld 007; Y=3650; L=9mm; TLI                                  | 14. Weld 010; Y=1500; Diam=4mm; PO            |
| 5. Weld 007; Y=4570; L=9mm; TLI                                  | 15. Weld 010; Y=1000; L=4mm; TLI              |
| 6. Weld 006; Y=2200; L=6mm; TLI                                  | 16. Weld 020; Y=4200; Diam=3mm; PO            |
| 7. Weld 006; Y=1900; Diam=2mm; PO (Porosity)                     | 17. Weld 019; Y=4550; Diam=2mm; PO            |
| 8. Weld 006; Y=100; L=5mm; TLI                                   | 18. Weld 019; Y=150; L=3mm; TLI               |
| 9. Weld 014; Y=3350; L=4mm; TLI                                  | 19. Weld 024; Y=1000; Diam=4mm; PO            |
| 10. Weld 014; Y=4721; L=6mm; LLI                                 | 20. Weld 027; Y=0; Diam=5mm; PO               |

This QA Inspector also observed Magnetic Particle Testing (MT) performed by ZPMC MT Technician Jin Jian Ting of LD3023-001 (side A); 12 Welds tested with MT indications identified as rejects by the ZPMC MT Technician at the following locations:

1. Weld 005; Y=3900; L=12mm; TLI (Transverse Linear Indication)
2. Weld 021; Y=480; L=11mm; LLI (Longitudinal Linear Indication)
3. Weld 025; Y=2650; L=14mm; LLI
4. Weld 025; Y=1550; L=4mm; TLI
5. Weld 014; Y=3300; L=5mm; TLI
6. Weld 012; Y=1850; Diam=3mm; PO (Porosity)
7. Weld 012; Y=0; L=4mm; LLI

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable

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contract documents.

### Summary of Conversations:

No relevant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Holmes,Stefan
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Hall,Steven
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QA Reviewer
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